



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/583,443	03/07/2007	Joerg Burghardt	095309.57883US	9046
23911	7590	10/09/2007	EXAMINER	
CROWELL & MORING LLP			HUYNH, PHUONG	
INTELLECTUAL PROPERTY GROUP				
P.O. BOX 14300			ART UNIT	PAPER NUMBER
WASHINGTON, DC 20044-4300			2857	
			MAIL DATE	DELIVERY MODE
			10/09/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/583,443	BURGHARDT ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Phuong Huynh	2857	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on 19 June 2006.

2a)  This action is **FINAL**.                    2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

4)  Claim(s) 15-34 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5)  Claim(s) \_\_\_\_\_ is/are allowed.

6)  Claim(s) 15-34 is/are rejected.

7)  Claim(s) \_\_\_\_\_ is/are objected to.

8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on 19 June 2006 is/are: a)  accepted or b)  objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All    b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)  Notice of References Cited (PTO-892) 4)  Interview Summary (PTO-413)  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948) Paper No(s)/Mail Date. \_\_\_\_.  
3)  Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 06/19/2006. 5)  Notice of Informal Patent Application  
6)  Other: \_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 15-34 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 15, at line 8, the limitation "wherein when the tire pressure changes in a manner characteristic of a filling process" renders the claim invention indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention because it is unclear to ascertain how, which manner, which characteristics "the tire pressure changes". Further, the claim invention is incomplete for omitting essential method steps and such omission amounting to a gap between the steps.

Claims 16-34 depend from rejected claim 15 and therefore are also rejected under 35 U.S.C. 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 15-21, and 25-34 are rejected under 35 U.S.C. 102(e) as being anticipated by Brown et al. (hereinafter "Brown") (US Patent No. 6,868,358).

Regarding claim 15, Brown discloses a method for monitoring the pressure of motor vehicle tires comprising the acts of:

determining a tire pressure value indicative of a tire filling pressure [see Brown: col. 6, lines 53-55]; comparing the determined tire pressure value with stored nominal value and determining whether a motor vehicle tire is at an incorrect tire pressure, based upon a result of the comparison [see Brown: Abstract; col. 6, lines; col. 8, lines 21-33]]; wherein when the tire pressure changes in a manner characteristic of a filling process, the stored nominal value is replaced by a new nominal value, with the determined tire pressure value being used to determine the new nominal value [see Brown: col. 8, lines 25-42; col. 11, lines 49; and col. 12, lines 6-18].

Regarding claim 16, Brown discloses that the comparison of the determined tire pressure value with the stored nominal value, determined at an earlier time, is used to determine whether a characteristic change has occurred in the tire pressure value [see Brown: col. 8, lines 21-42; and col. 16, lines 12-25].

Regarding claim 17, Brown discloses that characteristic change in the tire pressure value

occurs when the difference between the determined tire pressure value and the stored nominal value is greater than a predetermined threshold [see Brown: col. 15, line 62-col. 16, line 25].

Regarding claim 18, Brown discloses that the characteristic change in the tire pressure value occurs when the difference between the determined tire pressure value and the stored nominal value is greater than a predetermined threshold value for at least two wheels [see Brown: col. 1, lines 62-67; and col. 15, line 62-col. 16, line 25].

Regarding claim 19, Brown discloses that the threshold value is 0.2 bar [see Brown: col. 12, lines 45-55 and Figure 10].

Although Brown does not explicitly disclose "0.2 bar", it is still that Brown discloses the claimed "0.2 bar" because Brown discloses at col. 12, lines 45-55 that "Using a threshold value near 1 (e.g. 0.9995) sets a logical warning of 1, or true, on the second switch for an immediate caution warning. The driver would receive an immediate caution warning that a pressure and leak rate condition existed which requires attention. The switch then enables a block that computes time left to reach the critical low pressure value for display to the driver. This *warning block activates* at the pressure and leak rate combinations in FIG. 10 where the utility is 1", wherein the pressure value is at 200 kPa that is equivalent to 0.2bar.

Regarding claim 20, Brown discloses that the characteristic change in the tire pressure

value occurs only when the vehicle has been stopped or started between a time of determination of the determined tire pressure value and the earlier time of storage of the stored nominal values [see Brown: col. 13, line 64-col. 14, line 16; and col. 8, lines 21-42; and col. 16, lines 12-25].

Regarding claim 21, Brown discloses wherein the determined tire pressure value is subjected to a plausibility check if the characteristic change in the tire pressure value has been determined and the determined tire pressure value is stored as a comparison value only if the determined tire pressure value is classified as plausible [see Brown: col. 8, lines 21-42].

Regarding claim 25, Brown discloses that wherein a tire temperature and an ambient temperature are determined, and the tire pressure value is classified as plausible only when a difference between the tire pressure and the ambient temperature is less than a predetermined threshold value of 40 K [see Brown: col. 3, lines 27-52; col. 6, lines 15-50; col. 8, lines 21-42].

Although Brown does not disclose "less than a predetermined threshold value of 40K", Brown discloses that " By way of illustration, FIG. 2 illustrates a graph comparing empirically measured data taken of a tire at two inflation pressures, 220 kPa and 154 kPa, versus the temperature difference from ambient in degrees Kelvin. As speed increases, the temperature within a tire cavity increases. Plotting the gauge pressure against the temperature differential creates the data points at the two pressures shown in FIG. 2. It will be seen that the speed and load data from FIG. 2 can be fit to linear equation 4. The pressure and temperature have a well-defined relationship over a wide range of speeds and loads and fit lines 26, 28 at respective pressures. The intercept of the lines so defined by the measured data may be determined and

represents the gauge pressure at ambient temperature" and the range can be seen in Figure 2 as less than 40K. Therefore, Brown still discloses the range of "less than 40K".

Regarding claim 26, Brown discloses that wherein the tire pressure value is classified as plausible only when the respective plausible conditions are satisfied for at least 30 minutes [see Brown: col. 8, lines 21-42; col. 15, lines 25-35].

Regarding claim 27, Brown discloses wherein a tire temperature value is determined, and the tire temperature value is used for determination of the tire pressure values [see Brown: col. 5, lines 2-50].

Regarding claim 28, Brown discloses wherein temperature influence is compensated for in the determination of the tire pressure values [see Brown: col. 7, lines 39-47].

Regarding claim 29, Brown discloses that the threshold value is 0.2 bar [see Brown: col. 12, lines 45-55 and Figure 10].

Although Brown does not explicitly disclose "0.2 bar", it is still that Brown discloses the claimed "0.2 bar" because Brown discloses at col. 12, lines 45-55 that "Using a threshold value near 1 (e.g. 0.9995) sets a logical warning of 1, or true, on the second switch for an immediate caution warning. The driver would receive an immediate caution warning that a pressure and leak rate condition existed which requires attention. The switch then enables a block that computes time left to reach the critical low pressure value for display to the driver. This warning block activates at

the pressure and leak rate combinations in FIG. 10 where the utility is 1", wherein the pressure value is at 200 kPa that is equivalent to 0.2bar.

Regarding claims 30-32, Brown discloses that the characteristic change in the tire pressure value occurs only when the vehicle has been stopped or started between a time of determination of the determined tire pressure value and the earlier time of storage of the stored nominal values [see Brown: col. 13, line 64-col. 14, line 16; and col. 8, lines 21-42; and col. 16, lines 12-25].

Regarding claims 33 and 34, Brown discloses wherein the determined tire pressure value is subjected to a plausibility check if the characteristic change in the tire pressure value has been determined and the determined tire pressure value is stored as a comparison value only if the determined tire pressure value is classified as plausible [see Brown: col. 8, lines 21-42].

#### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown et al. (hereinafter "Brown") (US Patent No. 6,868,358) in view of Lin et al. (hereinafter "Lin") (US Patent Application Pub. No. 2002/0024432).

Regarding claim 22, Brown discloses the plausibility [see Brown col. 8, lines 21-42]; However, Brown does not disclose wherein the tire pressure value is classified as plausible only if the difference between the tire pressure value and a further tire pressure value associated with a same vehicle axle and an opposite side is less than a predetermined threshold value of 0.4 bar.

Lin teaches the tire pressure value is classified as plausible only if the difference between the tire pressure value and a further tire pressure value associated with a same vehicle axle and an opposite side is less than a predetermined threshold value of 0.4 bar [see Lin: Paragraphs [0031]; Paragraph [0041]].

It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to modify the invention of Brown to include the method, as taught by Lin, to avoid intruding upon the driver [see Lin: Paragraphs [0031]; Paragraph [0041]].

Regarding claim 23, Brown discloses the plausibility [see Brown col. 8, lines 21-42]; However, Brown does not disclose wherein the tire pressure value is classified as plausible only when all the determined tire pressure values are above a predetermined threshold value of 1.6 bar.

Lin teaches wherein the tire pressure value is classified as plausible only when all the determined tire pressure values are above a predetermined threshold value of 1.6 bar [see Lin: Paragraphs [0031], [0038]].

It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to modify the invention of Brown to include the method, as taught by Lin, generate an alarm every 2 minutes until the abnormal state is disengaged [see Lin: Paragraphs [0031]; Paragraph [0038]].

6. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brown et al. (hereinafter "Brown") (US Patent No. 6,868,358) in view of Boesch (US Patent No. 6,118,369).

Regarding claim 24, Brown discloses the plausibility [see Brown col. 8, lines 21-42]; However, Brown does not disclose that wherein the tire pressure value is classified as plausible only when the determined tire pressure value associated with a rear vehicle axle is greater the mean value of determined tire pressure values associated with a front vehicle axle minus a predetermined constant.

Boesch teaches wherein the tire pressure value is classified as plausible only when the determined tire pressure value associated with a rear vehicle axle is greater the mean value of determined tire pressure values associated with a front vehicle axle minus a predetermined constant [see Boesch: col. 3, lines 19-43; col. 7, lines 35-51]. Although Boesch does not explicitly teach the "predetermined constant" but one of ordinary skill in the art could ascertain the constant as zero since zero as a constant for better conversion so as "minus zero from an amount" returns the same amount.

It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to modify the invention of Brown to include the method, as taught by Boesch, determine

Art Unit: 2857

an absolute value of a calibrated metric to provide confidence that a low tire condition has been consistently detected [see Boesch: col. 3, lines 19-43; col. 7, lines 35-51].

### ***Conclusion***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuong Huynh whose telephone number is 571-272-2718. The examiner can normally be reached on M-F: 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eliseo Ramos-Feliciano can be reached on 571-272-7925. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Phuong Huynh  
Examiner  
Art Unit 2857

PH  
September 27, 2007

*Hal Wachsmann*  
HAL WACHSMAN  
PRIMARY EXAMINER  
AV2857